

Optimizing Hospital Supply Chain Processes for Savings

There's no denying that stocking hospital pharmaceuticals and supplies can be expensive and tie up a lot of capital. Not to mention the costs associated with ensuring appropriate availability and timely delivery for users. Yet bringing efficiencies to such important cost drivers—often 30 percent to 40 percent of a hospital's budget—can present meaningful savings.¹ With this in mind, this HFMA Executive Roundtable, sponsored by Cardinal Health, examines ways hospital supply chain administrators are optimizing pharmacy and medical-surgical supply chains for cost control and efficiencies, particularly in regard to process integration.

What are some successful practices relating to pharmaceuticals or medical-surgical supply chains that you would like to see replicated elsewhere in your organization?

W. Perry Flowers: In pharmacy, we receive items directly from our wholesaler that don't require any more than one touch point: The medications arrive, our professional staff inspects and scans the items, and then the items are delivered to the appropriate patient area. We also have technology that automatically orders more of an item when stock goes below its par level. The information is sent automatically to our wholesaler. We are able to minimize dead stock, where previously we would have ordered larger quantities of an item and stored them until needed. This shift has allowed us to redeploy about 500 labor hours per month across our 14 hospitals. Freeing up these staff has created more opportunities to hand deliver medication to the bedside provider, which reduces the hunting and gathering of medication that nurses used to do.

We also consign some inventory, meaning we put the cost of ownership on the vendor, so it's not a liability on the balance sheet. As an example, consider hemophilia factors. They are a high-cost, low-volume item that has to be kept on your shelf because you never know when a patient with hemophilia is going to come in. Traditionally, we would carry that cost of inventory on the books without a clear indication of the end point, when use would occur. With consigning, the cost is on the vendors' books for this period. I pay the vendor for the product when I use it, not when I receive it. My title of ownership is measured in minutes versus months or days. Currently, we consign inventory

for about two dozen products. The front-line user doesn't see any difference under such an arrangement, but the hospital's cost of inventory is decreased.

David Tomlinson: We have found success in several areas. We use bar code technology in the pharmacy, and we're beginning to use it increasingly in our medical-surgical units. Also, we have been very successful with using par levels in pharmacy and are starting to make great inroads with their use in our surgery area. We're hoping to expand use into other areas, as well. In addition, we've had considerable success with consolidating our pharmacy distribution channels with our wholesaler in such a way that we've been able to obtain better volume discounts.

Elaine Levy: Through our partnership with our wholesaler, we have automated a lot of our ordering and receiving. We order through the wholesaler's web site, and when the products come in, we inventory them through a handheld scanner that helps us streamline the whole system. Also, we've implemented another tool that automatically orders pharmaceuticals. Historically, we would order products, they would come in, and we would put them on the shelf and restock daily. Now all of our hospitals have automated dispensing machines (ADMs) on each patient care floor. Our wholesaler has the technology to read these machines remotely and determine what medications need to be replaced. Every night at 9 p.m., there is a picture taken of everything that is in our ADM. This automatically creates a purchase order that is filled by our wholesaler that night and delivered the next day. When the order is filled, it also is filled per med station, so a package of medications will

come in labeled as, say, '6 North.' When we receive our product that next morning, the pharmacy tech uses scanning to validate that it is the correct product going into the correct cube in the machine. This automated process helps us save on inventory costs and provides a safety check.

Mark Deponio: Our supply chain goals are similar to the rest of the industry, but our structure is unique. Munson Healthcare and Trinity Health [Novi, Mich.] partnered in the creation of the Northern Michigan Supply Alliance (NMSA), which operates a centralized supply chain function for a network of seven hospitals located in Northern Michigan. Our approach allows hospitals that do not have a common owner but want to work as a unified system to achieve a higher level of efficiency similar to what is possible for large integrated delivery networks.

We are now in a step-by-step process of streamlining the supply chain in all areas—from materials management to the OR and pharmacy. Benefits to those in the network are economies of scale in terms of contracting, purchasing leverage, and logistical efficiency. It is basically like sharing a purchasing and materials management department.

What are some potential benefits of integrating pharmacy and medical-surgical supply chain processes?

Deponio: Most hospitals already rely heavily on group purchasing organizations for contracts and product pricing. I don't see that changing anytime soon. I definitely expect there to be some opportunity for efficiencies and savings on the logistical side—how the organizations interact with their pharmaceutical distributors, how they place orders, how

they receive products, and how they distribute and manage products and inventories inside the four walls of the hospital. When we begin retooling our pharmacy supply chain, we're going to focus as much on logistics and inventory management as we do on sourcing/contracting/selection.

Tomlinson: A centralized management mentality to the supply chain can provide greater accountability in all areas. Centralization more easily allows for price validations and audit capabilities to ensure that pricing is correct and being captured. Traditionally with the supply chain, vendors often have worked directly with clinicians on placing orders without much involvement from the supply chain gatekeepers. With integration, you're minimizing the number of these personal decisions and the confusion and rework that tends to result. Instead, there's a shared vision and goals. For example, in pharmacy we have the formulary. There's a process to add to the formulary and a process to remove from the formulary, and there are cost implications across the board that are widely understood. You can take the concept of a formulary and develop a similar program for the addition or removal of products, thereby building a process that allows for similar control. My organization is planning to implement such a program eventually.

Levy: I think there is opportunity to create efficiencies by partnering on the supply side. We're trying to get pharmacy personnel to utilize our med[ical]-surg[ical] database system for items other than drug products. We have a catalog of items that we regularly order that is built into this med-surg database system. The database also has ordering/receiving and accounts payable functions. So when someone orders from the database, there is electronic tracking of the whole transaction—from order placement to item receipt and the generation of the applicable invoice. It really completes that whole audit trail. Currently in pharmacy, the audit trail is not that great for non-drug items.

Mark Rosenbaum: Interests of those in medication management and supply management are not mutually exclusive. Directors of pharmacy often are rethinking their operations to improve safety, quality, compliance, and cost containment. Likewise, procurement and materials managers want to eliminate waste and redundancies through standardization of inventory items and just-in-time processes.

Merging these two areas presents opportunities to simplify the supply chain, enhance supply chain transparency so that it becomes easier to know what you have and what you need, and streamline order-to-cash processes. It also can aid in reducing the number of vendors used. Having a better understanding of the total cost structure of these two areas can help you lower internal distribution cost.

Participants in this HFMA Executive Roundtable:

W. Perry Flowers is system executive, patient care support and system pharmacy, for Memorial Hermann Healthcare System, Houston, which consists of 14 acute care and specialty hospitals.

David Tomlinson is vice president of ancillary services for Centegra Health System, McHenry, Ill., which has two acute care hospitals, one specialty hospital, and multiple clinics.

Elaine Levy is system director of pharmacy for Sharp Healthcare, San Diego, a not-for-profit integrated regional healthcare delivery system that operates seven hospitals in San Diego County.

Mark Deponio is vice president of supply chain management, Munson Healthcare, Traverse City, Mich., a regional, not-for-profit healthcare system composed of seven hospitals located throughout northern Michigan, and president of the Northern Michigan Supply Alliance, a supply chain management company serving seven member hospitals.

Mark Rosenbaum is chief customer officer for Cardinal Health, Dublin, Ohio, a global manufacturer and distributor of medical and surgical supplies and technologies.

You can align expenses with clinical demand and reduce processing costs. You can even free up physical space and, therefore, capital, by reducing inventory and logistics.

What are some of the greatest challenges when integrating pharmacy and medical-surgical supply chain functions? And can these challenges be overcome?

Flowers: With pharmacy, you basically have one-shop procurement since the vast majority of medications come direct from the wholesaler. Very few ship directly from the manufacturer. Med-surg processes are more complex. Although the med-surg team gets a majority of its shipments from the wholesaler, it also has a considerable number from different vendors. So you have to recognize that the management style for just-in-time, next-day delivery will differ considerably when more than 90 percent of what you need is coming from one wholesaler as opposed to when 50 percent to 60 percent is coming from one wholesaler.

That said, even though this difference presents a challenge, I think it could be overcome. Perhaps a way to ease the difficulty in integrating supply chain processes for med-surg and pharmacy would be to have dedicated pharmacy buyers and dedicated med-surg buyers. So while the leadership may be one and the same, the staff may still have divided duties.

Levy: One of the biggest challenges for us is that our pharmaceutical database with our wholesaler contains about 30,000 items—far too many to try and marry with our med-surg database. We wouldn't want to try and build all of these items into yet another database.

Also, the ordering process can differ considerably between both areas. With pharmacy, quite often items are ordered stat because they're needed immediately. Also, the supply chain paperwork for pharmacy often is much more involved and requires greater consideration and time to process than is seen elsewhere. This is particularly true when it comes to medications. For example, a medication could come prepackaged in a unit dose or it could come in a bottle of 100 or 1,000. The pharmacy buyer needs to understand exactly what will be needed. With materials, you know that if you want a bedpan, you just order a bedpan. Also, with medications, it is so regulated as far as who can order, who can receive, and how shipments are received that it really kind of bypasses the whole med-surg supply chain.

Given these challenges, it's very difficult to integrate processes any more than we already have. We can use our med-surg database for nonmedication items. But for medications, I feel it is best for us to stick with how we're doing it through our wholesaler.

Rosenbaum: An integrated med-surg/pharma supply chain strategy might not work for every hospital. The approach typically works best when it is adopted by hospitals that are dedicated to lean organizational design. That's because it takes full commitment from the top levels of the organization. Hospital leadership has to clarify its goals and support long-term change management, and especially involve staff at all levels to be a part of this change.

Tomlinson: Lack of senior administrative leadership support can be a challenge. Without it, you are going to be spinning your wheels. People who are trying to implement the changes will eventually become frustrated and give up. Also, it's important to make sure that the clinicians and the business representatives are on the same page. The greatest obstacle may be a culture of "this is the way we've always done things."

That said, discomfort with change shouldn't necessarily deter the organization from integrating some of its processes. Integration often is the right thing to do. Frequently, barriers relating to culture can be overcome by communicating common goals that support the mission, vision, and values of the organization.

What advice would you offer for supporting the sharing of optimal practices between pharmacy and medical-surgical supply chain functions?

Levy: Pharmacy needs to understand the materials side and vice versa. Leadership for the two operations—the director of pharmacy and the director of materials at the site—really must understand each other's processes and appreciate what the other is dealing with daily. There really is no other good way to do this except for ongoing face-to-face meetings. As an example, at a recent meeting, we had one of our pharmacy buyers walk through specifically how orders are placed.



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February 2009
HFMA Executive Roundtable
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Rosenbaum: Communication is important. Both teams should meet often to share results and barriers and best practices. Also, although it's not always possible, it is really helpful to have a unified reporting structure where pharmacy and medical-surgical supply report to the same person. This person should understand both the clinical relevance of supply chain issues and the financial impact on the hospital. In addition, look for a supply chain partner that shares your supply chain vision and can help you implement that vision in both areas. This step alone can help reduce redundancy and provide external resources to support process change.

Deponio: To truly be successful, I think it's critical to have clinicians in supply chain roles. They can perform important functions, such as value analysis, that nonclinicians simply don't have the knowledge to do. Clinicians understand how the products are used and therefore are in the better position—when they have supply chain expertise and are also financially astute—to facilitate the product selection process. Even if the sourcing manager for a given category is incredibly knowledgeable, it's almost impossible for a nonclinician to have the same level of insight to guide and facilitate that process and make sure that the decision isn't about preference, but rather clearly stated specifications that support obtaining the lowest delivered cost for the required level of quality for the particular product.

Flowers: I would advise looking outside of health care for best practices. For example, consider models used at Wal-Mart or Lowe's. Wal-Mart's supply chain success is largely the result of making efficiency a top priority. The company took a simplified approach to determining which products to put on the shelf with no diminished customer satisfaction. At Lowe's, leadership figured out how to maintain inventory control while keeping handling costs in

check. For smaller items, such as screws, customers at Lowe's don't go to the front desk to ask for a screw and wait until it is brought to them. The customer brings the screw to the register. For more expensive or complicated items, such as custom paint or skill saws, these items are in a consolidated area where there's a high labor coefficient. The Lowe's model says that you put your labor toward things that are very expensive. Those in health care should take such a concept and ask whether labor spending has been allocated optimally. Are you putting the most labor on problem-prone, high-risk meds and not the standard items?

Tomlinson: It is important to really know your business. Capture some current metrics, and look at what they've been in the past and where you want to be. Use these metrics to effect change. Share them with the people who should be involved in the decision making. Clinicians, particularly physicians, want to see clear evidence that changes will bring about certain results. They have a relationship with vendors and perhaps years of success with a certain product. You've got to respect this perspective. Just as important, you have to share data with them about these products and vendors and look at them as partners in optimizing the supply chain.

Also, understand the environment. Understand the power plays among clinicians, and all the political interactions. And spend time shadowing personnel. Get in and understand the process. I regularly go on rounds with every department. It helps me learn. It's amazing how quickly you can see the solutions. Often those in the trenches are the ones who have the best answers.

Endnotes

- 1 "Supply Chain: Cost of Goods Grab Executives' Attention," *Materials Management in Health Care*, December 2008.



CardinalHealth

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